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NF546 Soy Health Claims

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Soy Health Claims

By Wanda Koszewski and Georgia Jones, Extension Nutrition Specialists

History of Soy

There are two distinct stories about soybean use. One is the age old use of soybeans in Asian countries. The other is the tremendous increase in production and use since World War II in Western countries. Soybeans are approximately 40% protein, 20% fat, 35% carbohydrates and 5% minerals such as calcium. During processing soybeans are crushed and separated into two main components, oil and protein. It is the protein portion that contains the isoflavones.

FDA Claim

In 1999, the U.S. Food and Drug Administration authorized that foods containing 6.25 grams of soy protein per serving may use the following statement on the label: "Diets low in saturated fat and cholesterol that include 25 grams of soy protein a day may reduce the risk of heart disease." The label also has to state the amount of soy protein in each serving.

Health Benefits of Soy

Soy protein can be a good substitute for animal products because unlike other beans, soybeans contain all the amino acids in the correct balance that is essential to good nutrition. Soy has been linked to improved heart health as well as decreased risk for some types of cancers.

Several clinical studies have been conducted to determine the benefit of soy for heart health. The American Heart Association recently concluded that 25-50 grams of soy can help lower levels of LDL cholesterol, known as "bad" cholesterol, by as much as 8%. The components of soy that help lower LDL cholesterol level are isoflavones. It is believed that isoflavones prevent LDL cholesterol from harming the walls of blood vessels by decreasing the formation of plaque in the vessel wall. However, adding soy to the diet had little effect in people who had normal cholesterol levels.

Soy isoflavones also have been beneficial in decreasing

prostate cancer in men. Men who drank soy milk once a day showed a reduction in the risk of developing prostate cancer.

Cautions

Research is mixed on soy and cancer risk reduction. Soy foods added into the diet of younger adult women were shown to be beneficial in decreasing the risk of breast cancer. In older women it may have the opposite effect, especially when consuming over 40 grams of soy per day in the form of supplements.

Soy isoflavones are called phytoestrogens or plant estrogens. They act like a weak form of estrogen. Phytoestrogens sold in over-the-counter supplements are of concern to some health professionals. Research on the health benefits of soy has been in the form of whole foods not soy supplements. Health professionals urge consumers to increase eating of soy foods, not the use of soy supplements.

Soy phytoestrogens may interfere with thyroid function. Consuming over 40 grams of soy per day, as a supplement, can slow the production of thyroid hormone. A diet that incorporates whole soy foods does not interfere with thyroid hormone production.

Sources of Isoflavones

Isoflavone concentrations vary among soy products and among different brands of the same product. The highest levels are in whole bean products that have not been highly processed. Examples would be soy nuts and tofu. The more the beans are processed, the greater the chance that some isoflavones are lost. Isoflavone content of some commonly consumed soy products are dry roasted soy nuts — 128.3 mg; tofu — 24.74 mg and soy drink — 7.01. To aid consumers in determining the level of isoflavones in various soy products, USDA and Iowa State University have developed a database of soy foods. The database is at the following website: www.nal.usda.gov/fnic/foodcomp/data/isoflav/isoflav.html.

Add soy foods into your diet in a number of ways. Use soy flour to thicken gravies and sauces. Add soy milk to baked goods and desserts. Here are some other helpful tips.

- Include soy-based beverages, muffins, sausages, yogurt, or cream cheese at breakfast.
- Use soy deli meats, soy nut butter, or add soy cheese to sandwiches.
- Top pizza or lasagna with soy cheese, pepperoni, sausages or “crumbles” (resembles ground beef).
- Grill soy hot dogs, burgers, marinated tempeh and baked tofu. Add barbecue sauce for flavor.
- Use tofu in stir fry, salads and soup.
- Pour soymilk on cereals or use it to make smoothies.
- Eat roasted soy nuts or a soy protein bar for a snack.

Begin by adding soy slowly until you get use to the texture and taste. After you have become accustomed to soy, gradually increase your consumption to 25 grams per day.

Resources of Soy and Recipes

American Soybean Association
www.amsoy.org

United Soybean Board
www.talksoy.com or www.soyfoods.com

How to Cook Soybeans

1. Cover beans with water and soak in the refrigerator overnight.
2. Drain water
3. In a large pan filled with six to eight cups of water, cook soybeans for about two hours on low heat.
4. Drain well, rinse and cool in the refrigerator.
5. One cup of dried soybeans will expand to about 3 cups.

Mock Gingerbread

2 cups cooked soybeans
1 cup brown sugar
1/2 cup molasses
1/2 teaspoon salt
1/2 teaspoon baking powder
1 teaspoon cinnamon
1 teaspoon nutmeg
1/4 teaspoon soda
4 large eggs

1. Lightly oil an 8 X 8-inch baking dish
2. In a blender or food processor, combine all ingredients except eggs and process until blended.
3. Continue blending, adding one egg at a time, until smooth
4. Pour batter into prepared dish and bake 45-50 minutes in a 350 degree oven, or until a toothpick inserted in the center comes out clean.
5. Cool at least 15 minutes before cutting.

Variation: Substitute one can of soybeans for the cooked soybeans. Rinse, drain and pat on a paper towel before blending other ingredients.

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Food and Drug Administration. October 20, 1999. FDA approves new health claim for soy protein and coronary heart disease. FDA Talk Paper (www.fda.gov).

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